

CLAIMS

What is claimed is:

1. An apparatus having an RF circuitry portion comprising:
an antenna creating an electromagnetic field; and
an active shield substantially canceling the effects of the electromagnetic field in a predetermined region.

2. The apparatus of claim 1, wherein said active shield is coupled to the RF circuitry portion of the device.

3. The apparatus of claim 2, further comprising:
an adjustment circuit located between said antenna and said RF circuitry portion.

4. The apparatus of claim 2, further comprising:
a coupler located between said RF circuitry portion and said active shield.

5. The apparatus of claim 3, further comprising:
a coupler located between said RF circuitry portion and said adjustment circuit

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1 6. The apparatus of claim 3, wherein said adjustment
2 circuit receives a reduced antenna signal.

1 7. The apparatus of claim 6, wherein said reduced antenna
2 signal is approximately ten percent of the antenna signal.

1 8. The apparatus of claim 3, wherein said adjustment
2 circuit includes a phase shifter.

1 9. The apparatus of claim 3, wherein said adjustment
2 circuit includes a variable gain amplifier.

1 10. The apparatus of claim 3, wherein said adjustment
2 circuit includes an attenuator.

1 11. The apparatus of claim 3, further comprising:
2 a sensor located in proximity to said active shield.

1 12. The apparatus of claim 3, further comprising:
2 a feedback circuit for controlling the adjustment
3 circuit.

1 13. The apparatus of claim 1, wherein said
2 predetermined region is near an operator's earpiece.

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1 14. A communication apparatus having an RF circuitry
2 portion comprising:
3 an antenna creating an electromagnetic field; and
4 a plurality of active shields for canceling the
5 effects of the electromagnetic field in a predetermined region.

1 15. The communication apparatus of claim 14, further
2 comprising a plurality of adjustment circuits located between
3 the RF circuitry portion and said plurality of active shields.

1 16. The communication apparatus of claim 15, wherein each
2 of said adjustment circuits include a phase shifter and a
3 variable gain amplifier.

1 17. The communication apparatus of claim 15, further
2 comprising:
3 a plurality of feedback circuits to control the active
4 shields.

1 18. The communication apparatus of claim 15, wherein said
2 number of active shields is approximately four.

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1 19. A communication apparatus comprising:
2 an antenna creating an electromagnetic field; and

3 a means for canceling the effects of the
4 electromagnetic field in a predetermined region.

1 20. A method comprising:
2 generating an electromagnetic field from an antenna;
3 and
4 canceling the effects of the electromagnetic field in
5 a predetermined region using an active shield.

1 21. The method of claim 20, wherein the step of canceling
2 further comprises:
3 coupling an RF circuitry portion to an active shield
4 through an adjustment circuit.

1 22. The method of claim 20, wherein the step of canceling
2 further comprises:
3 phase shifting and amplifying a signal from the
4 antenna before the signal reaches the active shield.

1 23. The method of claim 22, wherein the step of canceling
2 further comprises:
3 feeding back from a sensor located in proximity to
4 said active shield a signal which is used to vary the phase
5 shifting and amplifying.

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1 24. A method comprising:
2 generating an electromagnetic field from an antenna;
3 and
4 canceling the effects of the electromagnetic field in
5 a predetermined region using a plurality of active shields.

1 25. An apparatus comprising:
2 means for generating an electromagnetic field from an
3 antenna; and
4 means for canceling the effects of the electromagnetic
5 field in a predetermined region using an active shield.

1 26. The apparatus of claim 25, wherein the canceling means
2 further comprises:
3 means for coupling an RF circuitry portion to an
4 active shield through an adjustment circuit.

1 27. The apparatus of claim 25, wherein the canceling means
2 further comprises:
3 means for phase shifting and amplifying a signal from
4 the antenna before the signal reaches the active shield.

